

Rapid Test Kit for Phenylalanine Deamination

Intended Use

Rapid Test Kit for Phenylalanine Deamination is used for differentiation of *Proteus*, *Providencia* from Enteric Bacilli.

Summary

This test allows to differentiate members of the Proteae from other members of the *Enterobacteriaceae* by the ability of organisms in the genera within the Proteae to deaminate phenylalanine to phenyl pyruvic acid by enzymatic activity. *Proteus*, *Providencia* and *Morganella* species possess this capability. This reaction is very useful in the taxonomy of *Enterobacteriaceae*.

Principle

This test is based on the visualization of phenylalanine deamination reaction. Phenylalanine in the medium serves as a substrate for the enzyme, which is deaminated to form phenyl pyruvic acid. The addition of TDA Reagent following incubation results in appearance of deep green colour in case of a positive reaction or no colour change in case of a negative reaction.

Reagent

The Microexpress® Rapid Test Kit for Phenylalanine Deamination is a reagent set for laboratory use only.

The Microexpress® Rapid Test Kit for Phenylalanine Deamination comprises of:

1. 10 vials containing 1 mL medium each for phenylalanine deamination activity.

Additional Material Required

0.9% Saline, micropipettes, culture media, activated 2% glutaraldehyde solution, sterile test tube, incubator/water bath at 35°C-37°C.

Directions

Preparation of Inoculum

1. Isolate the organism to be identified on Brain Heart Infusion Agar (BHI).
2. Pick up a single well-isolated colony and streak on to BHI agar slant for enrichment and incubate at 35°C-37°C for 18-24 hours.
3. Observe for good growth.
4. Wash the growth with 2-3 mL sterile saline.
5. Match the turbidity of this suspension to McFarland Standard Number 0.5.

Inoculation of Vials

1. Bring the medium/vial to room temperature.
2. Inoculate the vial with 100 µL of the above prepared inoculum.
3. Incubate at 35°C-37°C for 4-5 hours.
4. Observe for growth.
5. Add 2-3 drops of TDA Reagent.

Quality Control

Appearance of the Medium: Clear, colourless medium.

Cultural Response: Vials are inoculated with 100 µL culture suspension of following organism, incubated for 4-5 hours at 35°C-37°C. Cultural response observed on addition of 2-3 drops of TDA Reagent is as follows.

Organism (ATCC)	Results
<i>Proteus hauseri</i> (13315)	+
<i>Providencia alcalifaciens</i> (9886)	+
<i>Klebsiella aerogenes</i> (13048)	-

Key: + = Green colour; - = No change in colour

Interpretation of Results

1. Development of green colour within one minute indicates a positive test.
2. No colour change denotes a negative test.

Remarks

1. The Microxpress® Rapid Test Kit for Phenylalanine Deamination is an *In vitro* diagnostic kit for laboratory and professional use only. Not for medicinal use.
2. The Microxpress® Rapid Test Kit for Phenylalanine Deamination cannot be used directly on clinical specimens.
3. Do not use damaged or leaking kits. Avoid contact of reagents with skin and eyes.
4. Clinical samples and microbial cultures should be considered as pathogenic biohazard and handled accordingly. Good laboratory practices and hazard precautions must be observed at all times.
5. Always use pure culture and a heavy inoculum for testing.
6. The test is an aid to identification and is not a confirmatory test. Complete identification should include determination of Gram reaction, morphology, and other biochemical and serological tests.
7. Observe within 5 minutes upon addition of the reagent as the green colour fades very quickly.

Storage and Stability

1. Store the Microxpress® Rapid Test Kit for Phenylalanine Deamination at 2°C-8°C away from bright light.
2. Stability of the Microxpress® Rapid Test Kit for Phenylalanine Deamination is as per the expiry date mentioned on the label.

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Practical Medical Microbiology, Mackie & McCartney, 13th edition 1969, Edited by J. G. Coffee, J. P. Duguid.
2. Clarke P.H. And S.T. Cowan. Biochemical Methods for Bacteriology, J. Gen. Microbiol., 1952, Vol. 6: 187-197.
3. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat. No.	Product Description	Pack Size
203180190001	Ready Prepared Kit	1 Kit (10Tests)

Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.
